



**DEFENSE LOGISTICS AGENCY**  
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COLUMBUS, OH 43218-3990

IN REPLY  
REFER TO

DSCC-VAI

June 17, 2004

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Draft of Military Standards MS24285 through MS24288 and MS24695 through MS24700, Connector, Rack and Panel, Miniature, project numbers 5935-4695 through 4703.

The initial drafts for these subject documents, dated 14 June 2004, are now available for viewing and downloading from the DSCC-VA Web site:

<http://www.dscccols.com/Programs/MilSpec>

or

<http://www.dscc.dla.mil/Programs/MilSpec/DocSearch.asp>

Major changes to these documents include: formatting documents into slash sheet format, drawings on documents have been redrawn to be more legible, and cancelled military references have been changed to the industry equivalents.

Concurrence or comments are required at this Center within 45 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply.

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NOTE: This initial draft, dated 14 June 2004 prepared by DLA-CC, has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (PROJECT NUMBER 5935-4697)

INCH-POUND

MS24288E  
DRAFT  
SUPERSEDING  
MS24288D  
20 July 1972

## DETAIL SPECIFICATION SHEET

### INSERT ARRANGEMENTS, ELECTRICAL, CONNECTOR, RACK AND PANEL

Inactive for new design after 8 June 1999.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-26518.

The Qualified Products List (QPL) associated with this inactive for new design specification will be maintained until acquisition of the product is no longer required, where upon the specification and QPL will be canceled.

#### REQUIREMENTS:

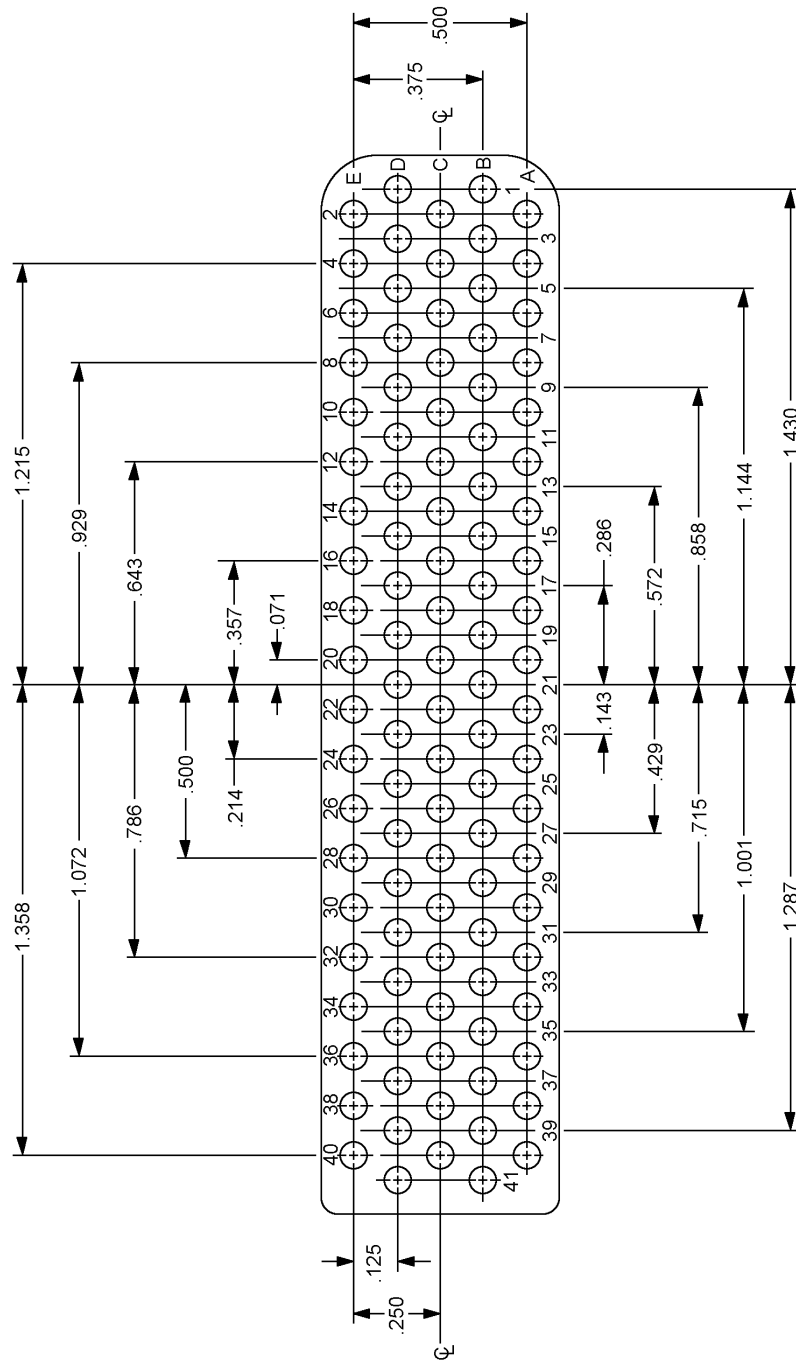
Dimensions and configuration see figure 1.

This is a design standard. Not to be used as a part number.

Arrangement designator	Contact size/quantity				Connector			
	20	16	12	Coax	Style	PIN 1/	Style	PIN
A1	102				Pin	MS24286RA1	Socket	MS24285RA1
A1	102				Pin	MS24286HA1	Socket	MS27399RA1
B1	52				Pin	MS24286RB1	Socket	MS24285RB1
B1	52				Pin	MS24286HB1	Socket	MS27399RB1
A2	65		12		Pin	MS24286RA2	Socket	MS24285RA2
A2	65		12		Pin	MS24286HA2	Socket	MS27399RA2
A3					Pin	MS24286RA3	Socket	MS24285RA3
A3					Pin	MS24286HA3	Socket	MS27399RA3
B2	36	4		1	Pin	MS24286RB2	Socket	MS24285RB2
B2	36	4		1	Pin	MS24286HB2	Socket	MS27399RB2
B3			18		Pin	MS24286RB3	Socket	MS24285RB3
B3			18		Pin	MS24286HB3	Socket	MS27399RB3
A4	33			9	Pin	MS24286RA4	Socket	MS24285RA4
A4	33			9	Pin	MS24286HA4	Socket	MS27399RA4
A5		50			Pin	MS24286RA5	Socket	MS24285RA5
A5		50			Pin	MS24286HA5	Socket	MS27399RA5
B4		26			Pin	MS24286RB4	Socket	MS24285RB4

1/ Part or Identifying Number (PIN).

MS24288E



SHELL SIZE A - 102 SIZE 20 CONTACTS

FIGURE 1. Shell size A1.

FIGURE 1. Connector mating and mounting details.

MS24288E

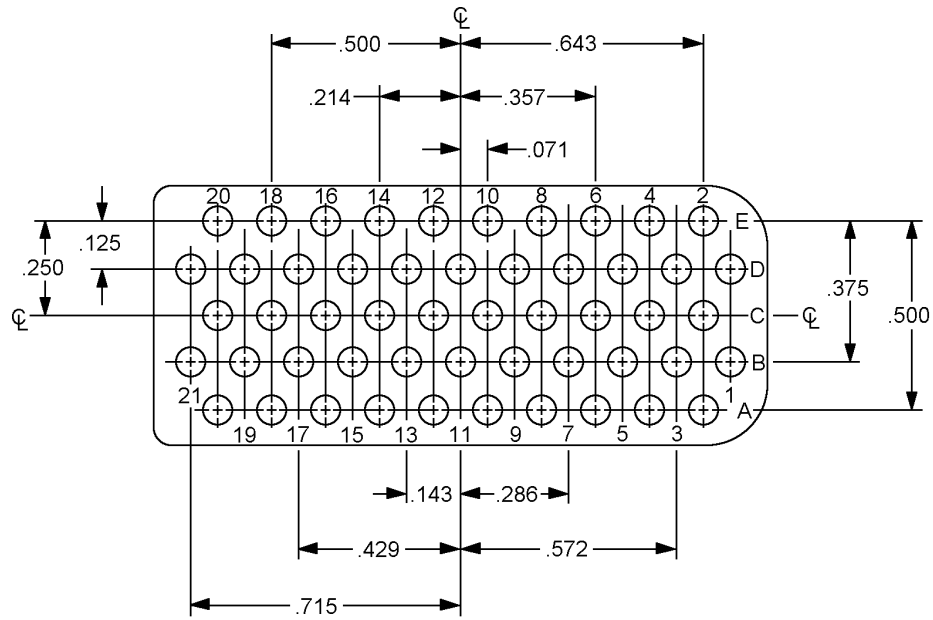
Inches	mm	Inches	mm
.071	1.80	.643	16.33
.125	3.18	.715	18.16
.143	3.63	.786	19.96
.214	5.44	.858	21.79
.250	6.35	.929	23.60
.286	7.26	1.001	25.43
.357	9.07	1.072	27.23
.375	9.53	1.144	29.06
.429	10.90	1.215	30.86
.500	12.70	1.287	32.69
.572	14.53	1.358	34.49
		1.430	36.32

NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the E2 contact shall be marked on the face of the pin insert.

FIGURE 1. Connector mating and mounting details - Continued.

# MS24288E



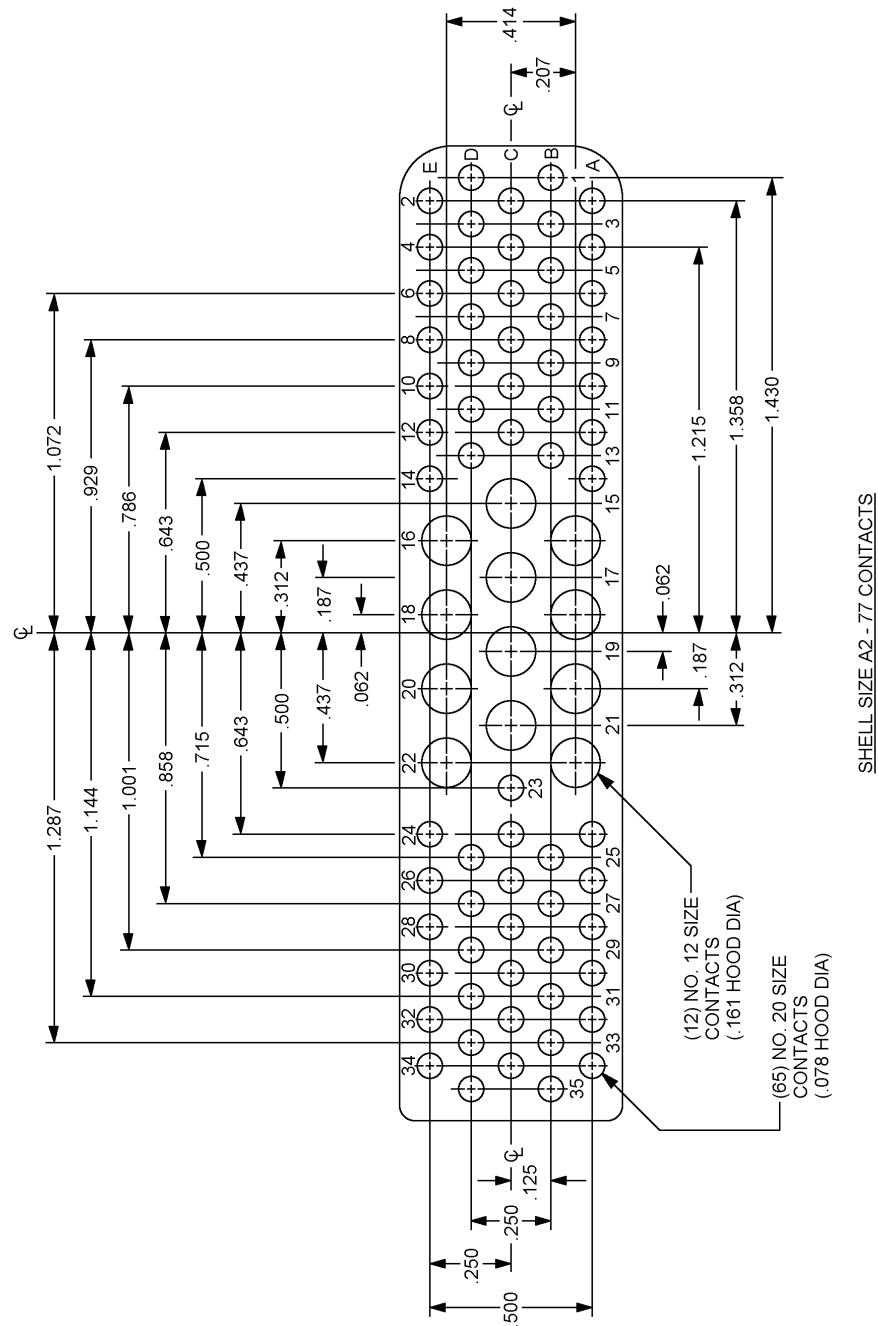
SHELL SIZE B - 52 SIZE 20 CONTACTS

Inches	mm
.071	1.80
.125	3.18
.143	3.63
.214	5.44
.250	6.35
.286	7.26
.357	9.07
.375	9.53
.429	10.90
.500	12.70
.572	14.53
.643	16.33
.715	18.16

## NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the E2 contact shall be marked on the face of the pin insert.

FIGURE 2. Shell size B1.



12 size 12 contacts and 65 size 20 contacts

FIGURE 3. Shell size A2.

# MS24288E

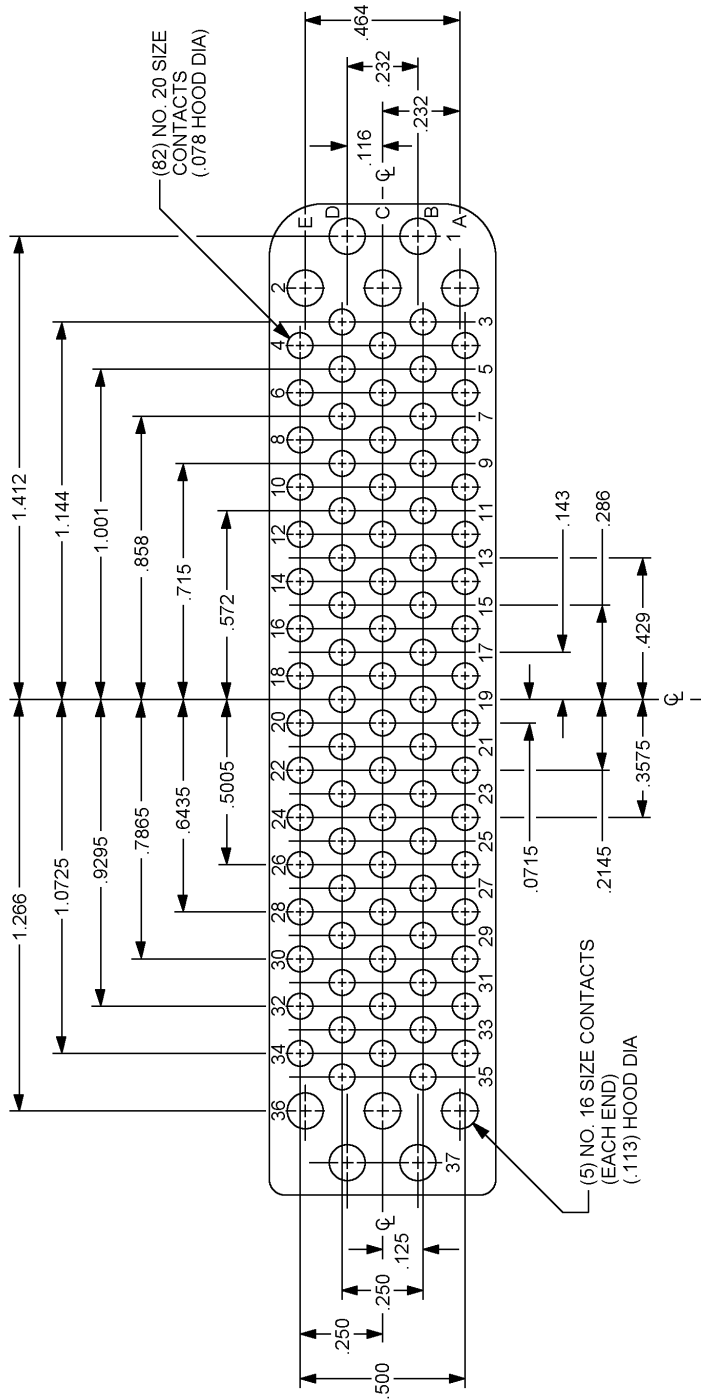
Inches	mm	Inches	mm
.062	1.57	.643	16.33
.078	1.98	.715	18.16
.125	3.18	.786	19.96
.161	4.09	.858	21.79
.187	4.75	.929	23.60
.207	5.26	1.001	25.43
.250	6.35	1.072	27.23
.312	7.92	1.144	29.06
.414	10.52	1.215	30.86
.437	11.10	1.287	32.69
.500	12.70	1.358	34.49
		1.430	36.32

## NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the E2 contact shall be marked on the face of the pin insert.

FIGURE 3. Shell size A2 - Continued.

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Inches	mm
.0715	1.816
.078	1.98
.113	2.87
.116	2.95
.125	3.18
.143	3.63
.2145	5.448
.232	5.89
.250	6.35
.286	7.26
.3575	9.080
.429	10.90
.464	11.79
.500	12.70
.5005	12.712
.572	14.53
.6435	16.345
.715	18.16
.7865	19.977
.858	21.79
.9295	23.609
1.001	25.42
1.0725	27.241
1.144	29.06

5 size 16 contacts and 82 size 20 contacts

FIGURE 4. Shell size A3.



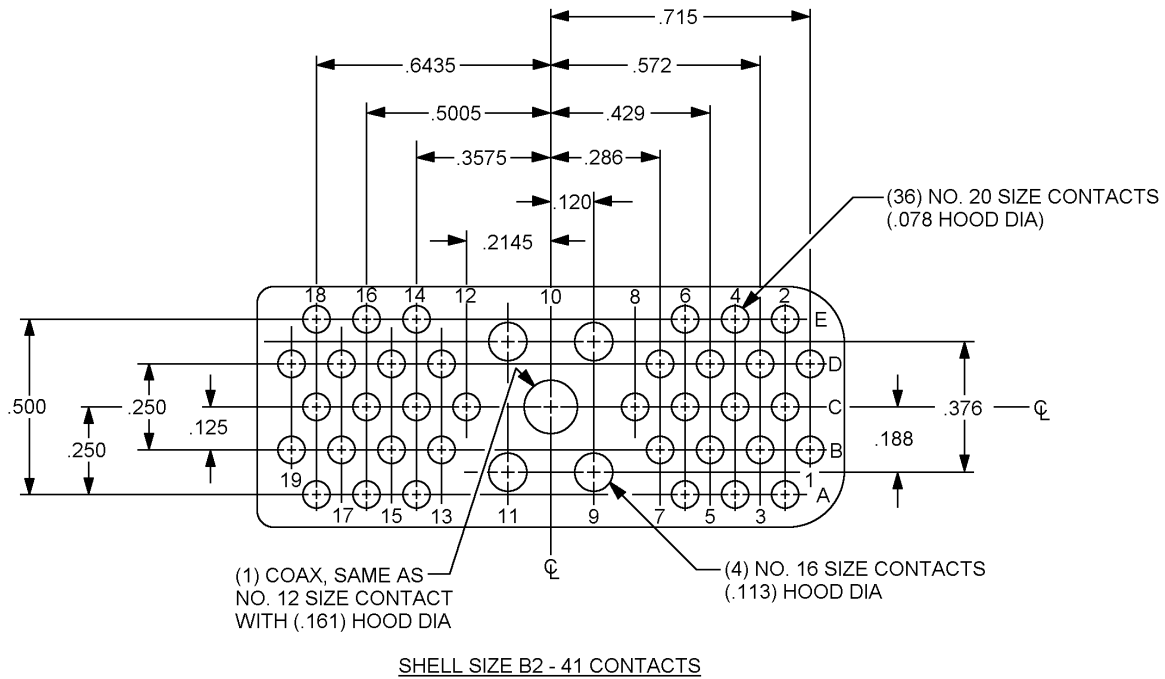
MS24288E

NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the E2 contact shall be marked on the face of the pin insert.

FIGURE 4. Shell size A3 – Continued.

# MS24288E



Inches	mm	Inches	mm
.113	2.87	.3575	9.080
.120	3.05	.376	9.55
.125	3.18	.429	10.90
.161	4.09	.500	12.70
.188	4.78	.5005	12.712
.2145	5.448	.572	14.53
.250	6.35	.6435	16.345
.286	7.26	.715	18.16

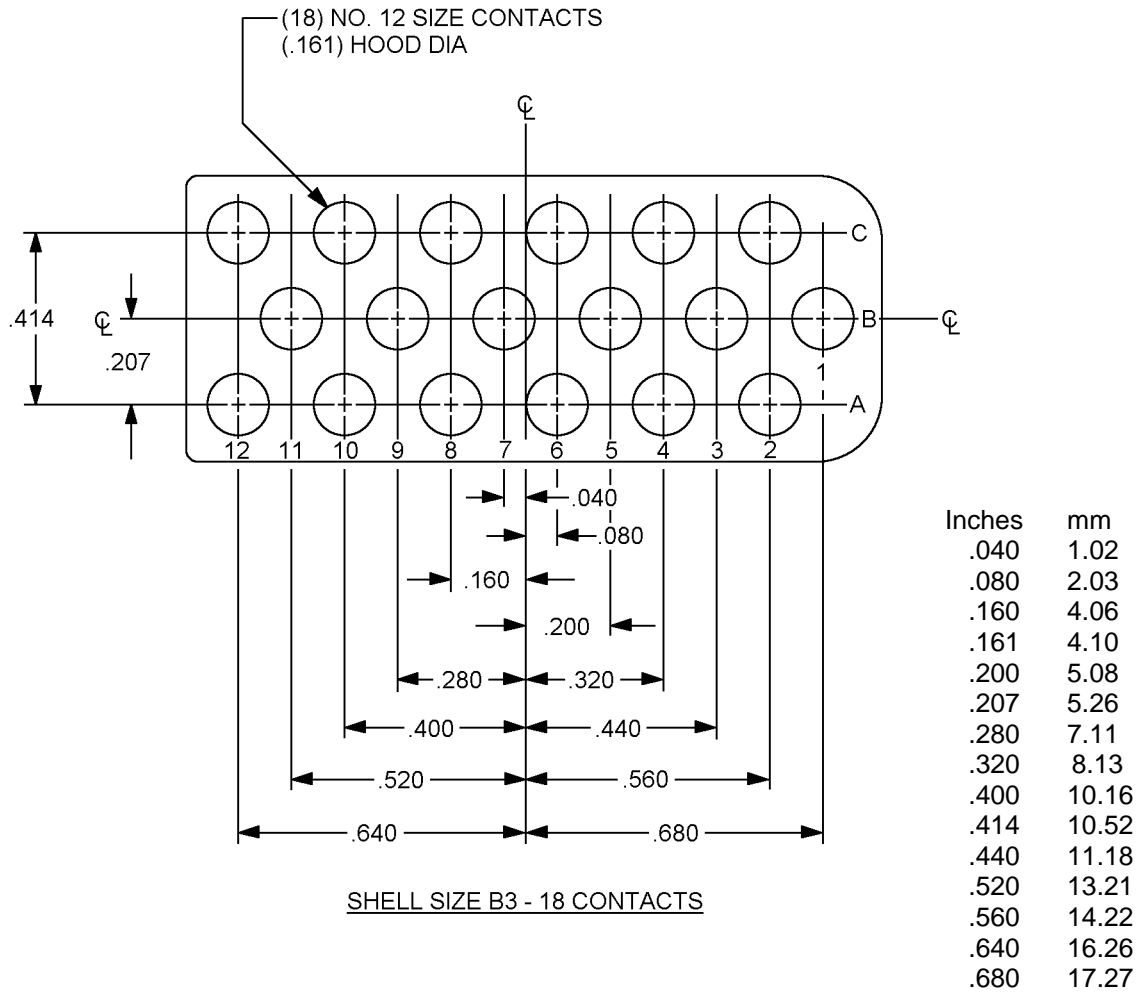
1 size coax contact, 4 size 16 contacts, and 36 size 20 contacts

## NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the E2 contact shall be marked on the face of the pin insert.

FIGURE 5. Shell size B2.

# MS24288E



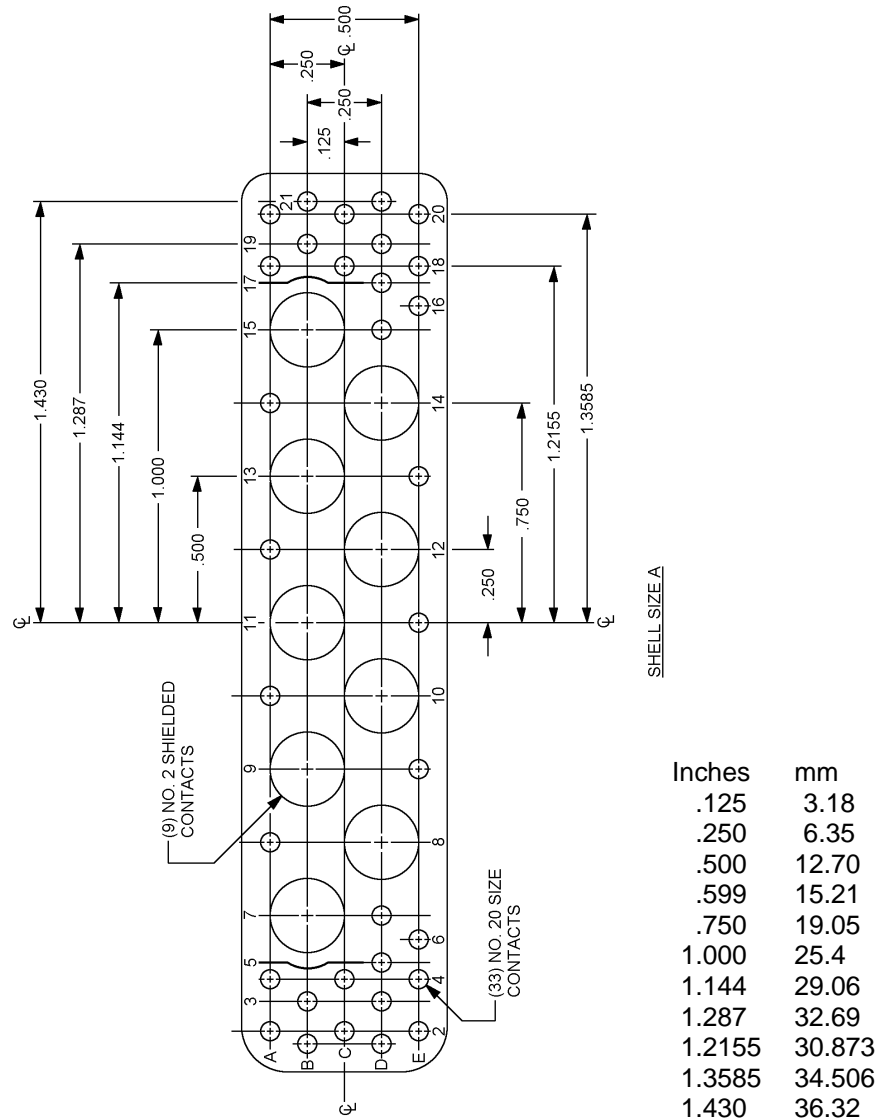
18 size 12 contacts

## NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the C2 contact shall be marked on the face of the pin insert
7. Use MS27184, MS27185, or MS27399 as applicable.

FIGURE 6. Shell size B3.

# MS24288E



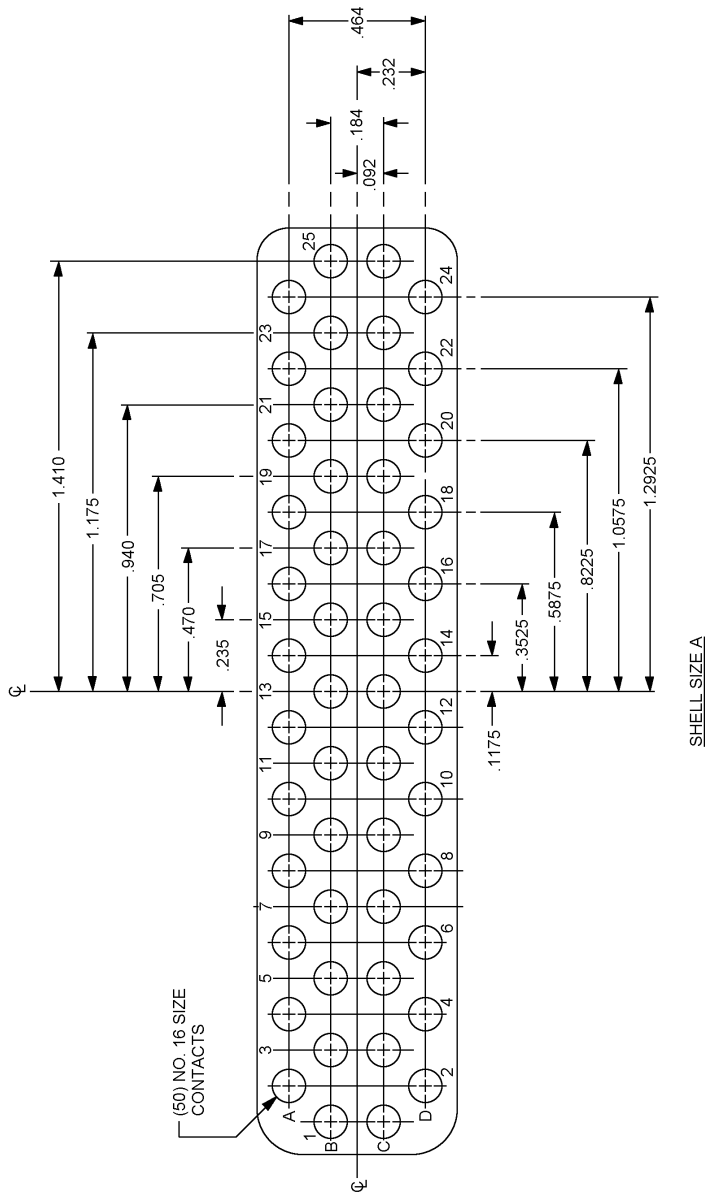
33 size 20 and 9 coax contacts

## NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm .002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the E2 contact shall be marked on the face of the pin insert.
7. Use MS27184, MS27185, or MS27399 as applicable.

FIGURE 7. Shell size A4.

# MS24288E



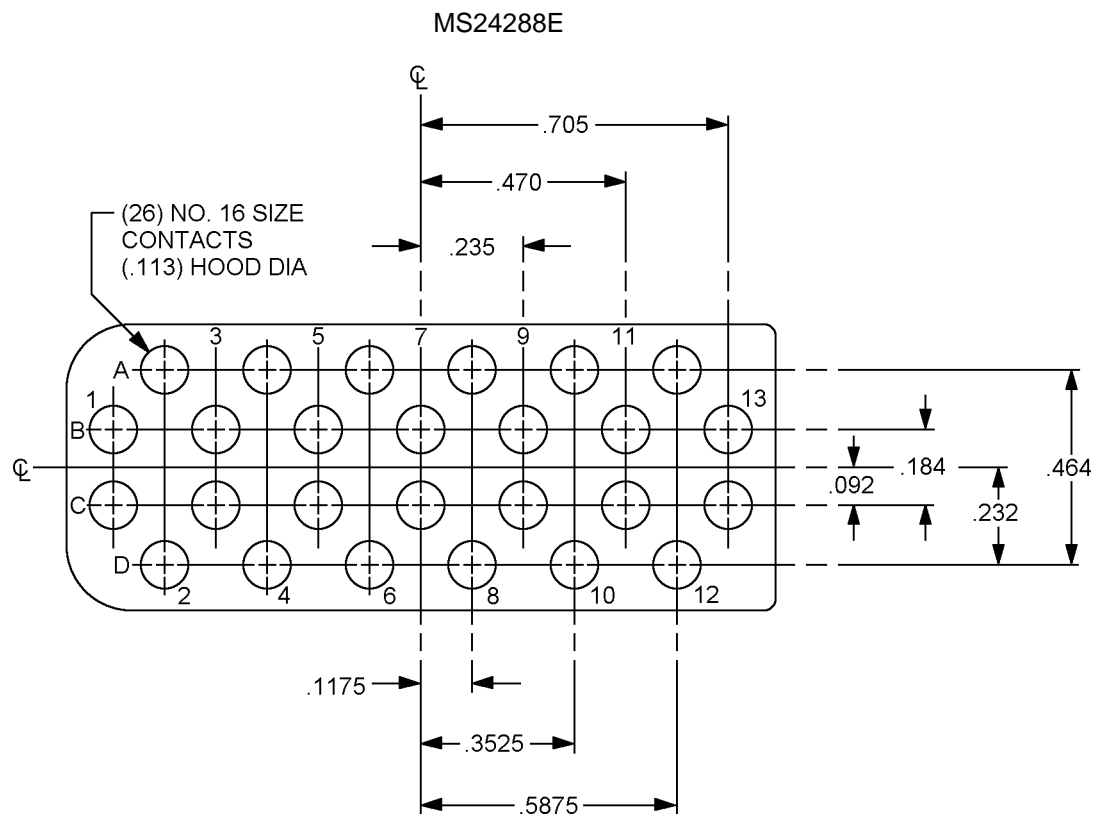
Inches	mm
.092	2.34
.1175	2.984
.184	4.67
.232	5.89
.235	5.97
.3525	8.95
.464	11.79
.470	11.94
.5875	14.92
.705	17.91
.8225	20.89
.940	23.88
1.0575	26.86
1.175	29.85
1.2925	32.830
1.410	35.81

59 size 16 contacts

## NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the D2 contact shall be marked on the face of the pin insert.
7. Use MS27184, MS27185, or MS27399 as applicable.

FIGURE 8. Shell size A5.



26 size 16 contacts

Inches	mm
.092	2.34
.113	2.87
.1175	2.98
.184	4.67
.232	5.89
.235	5.97
.3525	8.95
.464	11.79
.470	11.94
.5875	14.923
.705	19.05

#### NOTES

1. Dimensions are in inches
2. Metric equivalents are given for general information only.
3. Unless otherwise specified the tolerance is  $\pm 0.002$  (0.05 mm).
4. Rear face of pin insert shown socket insert opposite.
5. Contact identification shall be marked on rear surfaces. Characters shown are for rear face of pin insert.
6. The A2 contact shall be marked on face of the socket insert and the C2 contact shall be marked on the face of the pin insert.

FIGURE 9. Shell size B4.

## MS24288E

Referenced documents: In addition to MIL-DTL-26518 this document references the following:

MS24285  
MS24286  
MS27399

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

## CONCLUDING MATERIAL

Custodians:  
Air Force - 11  
DLA - CC

Preparing activity:  
DLA - CC

(Project 5935-4697-000)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at [www.dodssp.daps.mil](http://www.dodssp.daps.mil).

<b>PROJECT NUMBER</b> 5935-4697	<b>COMPILATION OF COMMENTS</b>		(DOD use only) <b>COMMENT NUMBER</b>
<b>DOCUMENT NUMBER</b> MS24288E	<b>COMMENTOR (NAME OR CODE)</b>		<input type="checkbox"/> <b>MFR</b> <input type="checkbox"/> <b>USER</b> <input type="checkbox"/> <b>IND ASSOC</b>
<b>DOD USE ONLY</b>	<b>DEPT</b>	<input type="checkbox"/> <b>ARMY</b> <input type="checkbox"/> <b>NAVY</b> <input type="checkbox"/> <b>AF</b> <input type="checkbox"/> <b>DLA</b> <input type="checkbox"/> <b>NSA</b> <input type="checkbox"/> <b>CNDN</b> <input type="checkbox"/> <b>NASA</b>	<input type="checkbox"/> <b>ESSENTIAL</b> <input type="checkbox"/> <b>SUGGESTED</b>
<b>RECOMMENDED DISPOSITION OF COMMENTS</b>	<input type="checkbox"/> <b>ACCEPTANCE</b> <input type="checkbox"/> <b>NON-ACCEPTANCE-SEE REASON</b> <input type="checkbox"/> <b>WITHDRAW</b> <input type="checkbox"/> <b>MODIFY</b> <input type="checkbox"/> <b>DISCUSS</b>		
<b>FINAL DISPOSITION OF COMMENTS</b>	<input type="checkbox"/> <b>ACCEPTED</b> <input type="checkbox"/> <b>NON-ACCEPTED</b> <input type="checkbox"/> <b>WITHDRAWN</b> <input type="checkbox"/> <b>MODIFIED</b>		

DSCC FORM 155B

<b>PROJECT NUMBER</b> 5935-4697	<b>COMPILATION OF COMMENTS</b>		(DOD use only) <b>COMMENT NUMBER</b>
<b>DOCUMENT NUMBER</b> MS24288E	<b>COMMENTOR (NAME OR CODE)</b> _____		<input type="checkbox"/> <b>MFR</b> <input type="checkbox"/> <b>USER</b> <input type="checkbox"/> <b>IND ASSOC</b>
<b>DOD USE ONLY</b>	<b>DEPT</b>	<input type="checkbox"/> <b>ARMY</b> <input type="checkbox"/> <b>NAVY</b> <input type="checkbox"/> <b>AF</b> <input type="checkbox"/> <b>DLA</b> <input type="checkbox"/> <b>NSA</b> <input type="checkbox"/> <b>CNDN</b> <input type="checkbox"/> <b>NASA</b>	<input type="checkbox"/> <b>ESSENTIAL</b> <input type="checkbox"/> <b>SUGGESTED</b>
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DSCC FORM 155B